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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,698	06/27/2003	M. Benton Free	58399US002	7675

20311 7590 04/18/2005

MUSERLIAN, LUCAS AND MERCANTI, LLP  
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RECEIVED  
APR 20 2005

EXAMINER

PARKER, FREDERICK JOHN

ART UNIT PAPER NUMBER

1762

DATE MAILED: 04/18/2005

MUSERLIAN, LUCAS AND MERCANTI LLP

Please find below and/or attached an Office communication concerning this application or proceeding.



# Office Action Summary

Application No.

10/607,698

Applicant(s)

FREE ET AL

Examiner

Frederick J. Parker

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-28 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-16 and 18-24 is/are rejected.
- 7) ☒ Claim(s) 4 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9-22/03; 11/5/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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## DETAILED ACTION

### *Specification*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The title is too generic.

### *Claim Objections*

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claim 12-29 been renumbered 11-28, respectively.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-2,5-15, 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haubrich et al US 2003/0203101 in view of Lemelson US 5866195.

Haubrich et al teaches forming patterned structures on a substrate to form electrophoretic displays, circuits, etc. The process steps comprise printing on the substrate a strippable polymer-based maskant material which represents the desired pattern; depositing on the patterned substrate a conductive metal which is substrate adherent; and removing the strippable material with conductive material thereon by means including mechanical (physical stripping/ adhesive tape peeling, [0043]. It is the Examiner's position that this would have reasonably suggested other mechanical/ physical means well-known to remove coatings such as impact/ media blasting. The process leaves conductive material on surfaces where the strippable maskant was NOT present, and vice-versa [0029]. The strippable maskant polymer pattern is applied by printing methods such as screen printing, ink jet, gravure, etc [0018]. The method provides the benefit of a simpler, cleaner method than photolithography or etching to selectively form patterned surfaces. Applying a second, substrate adherent polymer rather than a metal to the patterned substrate surface is not taught. However, Lemelson teaches that conductive polymers

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may be used for circuitry and other electronic applications, and may be applied to substrates by dip or roller coating, etc [col. 21, 39-51], and further col. 22, 19-25 teaches the equivalence of such conductive polymers with metals and semiconductors, and the replacement of such conventional materials by the conductive polymers, because of the expectation of equivalent electrical conduction. Per claim 2, the strippable maskant polymer necessarily has a lower surface energy than the substrate adherent polymer to allow its removal while maintaining the conductive polymer on the substrate. Thus, it would have obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Haubrich et al by substituting the conductive polymers of Lemelson for the metals of the conductive layer of Haubrich et al because of the expectation of forming patterned conductive articles for electronic applications, wherein the conductive polymers substituted for the conductive metals would have reasonably provided equivalent performance.

As to claims 5-8, 18-22, the dimensions and height of the polymer would have been determined by the skilled artisan using routine experimentation for any desired end-use application.

7. Claims 3,16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haubrich et al US 2003/0203101 in view of Lemelson US 5866195 and further in view of Laubacher et al US 5759625.

Haubrich et al and Lemelson are cited for the same reasons previously discussed, which are incorporated herein. A fluoropolymer-based maskant material is not cited.

Laubacher et al teaches on column 1, 43-50 that amorphous fluoropolymers have a "smooth, non-stick character" which resists adherence to other polymers, properties which would make the

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fluorocarbon polymer beneficial as the strippable polymer-based maskant of Haubrich et al.

Therefore, it would have obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Haubrich et al in view of Lemelson by utilizing the fluorocarbon polymer materials of Laubacher et al as the strippable maskant because of the low adhesion properties of the fluoropolymer materials, which would make them readily strippable.

8. Claims 4,17,25-28 distinguish over the prior art which does not teach nor suggest to apply a continuous substrate-adherent polymer comprising a polyamide. Dependant claims 4,17 are objected to for depending from a rejected base claim. Claims 25-28 are allowed. All claim numbers refer to renumbered claims.

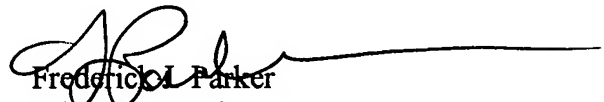
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick J. Parker whose telephone number is 571/ 272-1426.

The examiner can normally be reached on Mon-Thur. 6:15am -3:45pm, and alternate Fridays.

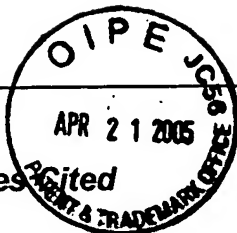
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meeks Timothy can be reached on 571/272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Frederick L. Parker  
Primary Examiner  
Art Unit 1762

fjp



# Notice of References Cited

Application/Control No.

10/607,698

Applicant(s)/Patent Under  
Reexamination  
FREE ET AL.

Examiner

Frederick J. Parker

Art Unit

1762

Page 1 of 1

## U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-5,759,625	06-1998	Laubacher et al.	427/264
	B	US-5,866,195	02-1999	Lemelson, Jerome H.	427/62
	C	US-2003/0203101	10-2003	Haubrich et al.	427/96
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

## FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

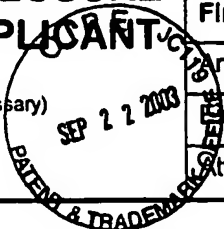
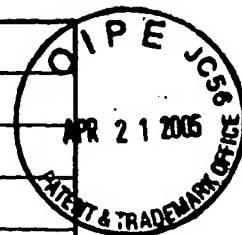
## NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



Substitute for form 1449A/PTO (modified)		Application Number	10/607698
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary) Page 1 of 2		Filing Date	June 27, 2003
		First Named Inventor	Free, M. Benton
		Art Unit	
		Examiner Name	
		Attorney Case Number	58399US002



U.S. Patent Documents					
Exam. Init.*	Cite No.	Document Number	Publication Date or Issue Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Doc. Number-(Kind Code if Known)			
28	A1	US- 2,532,011	11/28/1950	Dahlquist et al	
	A2	US- 2,607,711	08/19/1952	Hendricks	
	A3	US- 3,318,852	05/09/1967	Dixon	
	A4	US- 3,502,497	03/24/1970	Crocker	
	A5	US- 3,931,454	01/06/1976	Sprengling	
	A6	US- 4,241,198	12/23/1980	Kobayashi	
	A7	US- 4,728,571	03/01/1988	Clemens et al	
	A8	US- 5,032,460	07/16/1991	Kantner et al	
	A9	US- 5,104,711	04/14/1992	Marsek	
	A10	US- 5,121,134	06/09/1992	Albinson et al	
	A11	US- 5,145,717	09/08/1992	Drury	
	A12	US- 5,165,962	11/24/1992	Daly	
	A13	US- 5,202,190	04/13/1993	Kantner et al	
	A14	US- 5,214,119	05/25/1993	Leir et al	
	A15	US- 5,290,615	03/01/1994	Tushaus et al	
	A16	US- 5,356,706	10/18/1994	Shores	
	A17	US- 5,468,324	11/21/1995	Hong	
	A18	US- 5,658,469	08/19/1997	Jennison	
	A19	US- 5,750,630	05/12/1998	Sengupta	
	A20	US- 5,759,625	06/02/1998	Laubacher et al	
	A21	US- 6,300,042 B1	10/09/2001	Mancini et al	
	A22	US- 6,329,227 B2	12/11/2001	Anda et al	
	A23	US- 6,352,758 B1	03/05/2002	Huang et al	
	A24	US- 6,498,114 B1	12/24/2002	Amundson et al	
	A25	US- 6,559,474 B1	05/06/2003	Craighead et al	


*Examiner: <i>[Signature]</i>	Date Considered: <i>4-13-05</i>
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Information Disclosure Statement)

Substitute for form 1449A/PTO (modified)  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)  Page 2 of 2	Application Number	10/607698
	Filing Date	June 27, 2003
	First Named Inventor	Free, M. Benton
	Art Unit	
	Examiner Name	
	Attorney Case Number	58399US002

**OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

Exam. Init.	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
W	C1	<u>Journal of Applied Polymer Science</u> , Vol. 13, "Estimation of the Surface Free Energy of Polymers", D.K.Owens and R.C.Wendt, pp. 1741-1747, 1969.

*Examiner: 	Date Considered: 4/13/05
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*Information Disclosure Statement)*

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

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Application Number 10/607698

Filing Date June 27, 2003

First Named Inventor Free, M. Benton

Art Unit 1762

Examiner Name

Attorney Case Number 58399US002



## U.S. Patent Documents

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		Doc. Number-(Kind Code if Known)			
	A1	US- 3,532,540	10/06/70	Pearson et al.	/
	A2	US- 5,209,815	05/11/93	Fleming et al.	
	A3	US-			
	A4	US-			
	A5	US-			
	A6	US-			
	A7	US-			
	A8	US-			
	A9	US-			
	A10	US-			
	A11	US-			

## Foreign Patent Documents

Exam. Init.*	Cite No.	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Translation (Check if yes)
		Ctry. Code	Number-KindCode (if known)				
	B1	DE	3924716	02/01/90			no
	B2						
	B3						
	B4						
	B5						
	B6						
	B7						

## OTHER DOCUMENTS

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	C1		
	C2		
	C3		

\*Examiner: *D. Park*

Date Considered: 4-13-05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.